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EXAMINER	
ABDI, AMARA	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/734,613	LOVE ET AL.	
	Examiner	Art Unit	
	Amara Abdi	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 September 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-46 and 49* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *47 and 48* is/are allowed.

6)☒ Claim(s) *1-5,7-10,13-29,32-46 and 49* is/are rejected.

7)☒ Claim(s) *6,11,12,30 and 31* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's response to the last office action, filed September 06, 2007 has been entered and made of record.

2. In view of the Applicant amendments, the objection to the drawings is expressly withdrawn.

3. In view of the Applicant amendments, the objection to the specification is expressly withdrawn.

4. In view of the Applicant arguments, the objection to the claims 6 and 11 is expressly withdrawn.

5. In view of the Applicant amendments, the objection to the claims 2,3-5,15-16 and 25 is expressly withdrawn.

6. Applicant's arguments with respect to claims 1-5,7-10,13,-30,32-46, and 49 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. The claimed invention is directed to non-statutory subject matter. Claims 45-46 are rejected. "A software carrier comprising computer readable instructions for controlling a computer" must be "computer readable medium encoded with software" in order to be statutory.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1-3,7,13-19, and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (US-PGPUB 2001/0043236) in view of Agnes et al. (US 6,918,095) and Inoue et al. (US-PGPUB 2003/0149780).

The recitation "a method of coding a view in a 2-dimensional CAD drawing" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Yamamoto discloses a CAD system, comprising:

b) identifying a view in the drawing (paragraph [0012], line 11-14, and paragraph [0058], line 10-11);

c) identifying a feature of the view, where the feature comprises a graphic entity or a group of graphic entities (paragraph [0012], line 14-18, and paragraph [0058], line 12-13);

d) extracting properties of the feature from the 2D CAD drawing (paragraph [0050], line 3-4), (the extracting of form of every feature is read as the same concept as the extracting of properties of the feature from the 2D CAD drawing), where the properties include vector properties associated with the graphic entity or group of graphic entities (paragraph [0045], line 11-14), (it is obvious that the graphic entity includes a vector properties);

Yamamoto does not explicitly mention the following items:

1) filtering the two dimensional CAD drawing to temporarily remove extraneous material therefrom; and

2) generating code bits representative of the extracted properties, and adding the code bit to a view code for the view, and storing the view code

(A) Concerning item 1):

Agnes et al., in analogous environment, teaches a dimension generation filter and analysis where filtering the two dimensional CAD drawing to temporarily remove extraneous material therefrom (FIG. 2, column 4, line 10-15, and column 8, line 24-26), (it is clearly shows in the Agnes's patent that the image is two dimensional image on column 5, line 13-15, and column 8, line 24-26).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Agnes et al., where filtering the 2 dimensional

CAD drawing, in the system of Yamamoto in order to provide a user with the capability to better control the dimension generation process (column 1, line 49-50).

(B) Concerning item 2):

Inoue et al., in analogous environment, teaches a verification of image data, where generating code bits representative of the extracted properties, and adding the code bit to a view code for the view (paragraph [0111], line 2-4), (the generating of MPEG-4 bit stream is read as the same concept as the generating of code bits representative of the extracted properties and it is interpreted as the same concept as the coding that was mentioned in b) of claim 1, and the adding of "IPMP" stream to the stream of plurality of objects is read as the same concept as the adding of the code bit to a view code for the view), and storing the view code (paragraph [0188], line 3-7), (the storing of program code is read as the same concept as the storing of the view code).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Inoue et al., where adding the code bits, in the system of Yamamoto in order to efficiently execute verification processing (paragraph [0014], line 2-3).

(2) Regarding claim 2:

Yamamoto discloses the step c) for further groups of entities in the view (paragraph [0045], line 11-15).

Yamamoto does not explicitly mention the repeating of step f), where adding the code bits to a view code for the view.

Inoue et al., in analogous environment, teaches a verification of image data, where adding the code bit to a view code for the view (paragraph [0111], line 2-4), (the adding of "IPMP" stream to the stream of plurality of objects is read as the same concept as the adding of the code bit to a view code for the view).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Inoue et al., where adding the code bits, in the system of Yamamoto in order to efficiently execute verification processing (paragraph [0014], line 2-3).

(3) Regarding claim 3:

Yamamoto further discloses that the group of graphic entities includes entities having similar properties (paragraph [0047], line 4-6), (the properties are read as the geometric features), entities of a similar type or entities (paragraph [0046], line 13-15), (the similar type or entities is read as the similar class), which form the group by virtue of their location (paragraph [0065], line 9-10).

(4) Regarding claim 7:

Yamamoto further discloses that the step of extracting the properties comprises identifying a type for each property from a predefined plurality of property types (paragraph [0042], line 5-7), each property type having associated items of property data (paragraph [0053], line 4-5), extracting the property data from the CAD drawing (paragraph [0050], line 3-4) and writing the type and associated property data items to a list (paragraph [0051], line 1-3), (the class is read as the list where the property data items is written).

(5) Regarding claim 13:

Yamamoto discloses all the subject matter as described in claim 1 above.

Yamamoto does not explicitly mention that the storing of the view code includes encrypting the view code and storing the encrypted view code.

Inoue et al., in analogous environment, teaches a verification of image data, where the storing of the view code (paragraph [0188], line 3-7), (the storing of program code is read as the same concept as the storing of the view code) includes encrypting the view code and storing the encrypted view code (paragraph [165], line 5-9), (the encrypting is read as encoding "referring to the Merriam Webster dictionary", and the transferring of the object stream to the memory is read as the same concept as the storing of the encrypted view code).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Inoue et al., where adding the code bits, in the system of Yamamoto in order to efficiently execute verification processing (paragraph [0014], line 2-3).

(6) Regarding claim 14:

Yamamoto discloses the catalogue being a portion of the database in which a sub-set of drawing is stored (paragraph [0071], line 13-16), (the catalogue is read as the local mass storage which is a portion of database).

Yamamoto does not explicitly mention the storing of the encrypted view code.

Inoue et al., in analogous environment, teaches a verification of image data, where storing the encrypted view code (paragraph [165], line 5-9), (the storing of the encrypted view code is read as the same concept as the storing of encoded programs).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Inoue et al., where adding the code bits, in the system of Yamamoto in order to efficiently execute verification processing (paragraph [0014], line 2-3).

(7) Regarding claim 15:

Yamamoto discloses that the CAD system are encoded in a computer program and stored in a computer readable storage medium (paragraph [0071], line 3-5), (it is read that the CAD system comprises all the views).

Yamamoto does not explicitly mention the storing of encrypted view codes in the drawing.

Inoue et al., in analogous environment, teaches a verification of image data, where storing the encrypted view code (paragraph [165], line 5-9), (the storing of the encrypted view code is read as the same concept as the storing of encoded programs).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Inoue et al., where adding the code bits, in the system of Yamamoto in order to efficiently execute verification processing (paragraph [0014], line 2-3).

(8) Regarding claim 16:

Yamamoto further discloses the storing of at least one of the image file of the drawing (paragraph [0039], line 6), (the image file of the drawing is read as the image data), details of a part or component depicted by the drawing, and other information relating to the drawing (paragraph [0071], line 13-16), (it is read that the CAD system comprises the details of a part or component depicted by the drawing, and other information relating to the drawing).

(9) Regarding claim 17:

Yamamoto discloses all the subject matter as described in claim 1 above.

Yamamoto does not explicitly mention that the filtering of the drawing includes temporarily removing a frame/ boarder of the drawing.

Agnes et al., in analogous environment, teaches a dimension generation filter and analysis where filtering of the drawing includes temporarily removing a frame/ boarder of the drawing (column 2, line 37-40), (the removing of the frame/ boarder is read as the same concept as deleting of the drawing data).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Agnes et al., where filtering of the drawing, in the system of Yamamoto in order to provide a user with the capability to better control the dimension generation process (column 1, line 49-50).

(10) Regarding claim 18:

Yamamoto discloses the identifying of line entities, which make up the frame/boarder (paragraph [0044], line 14-17), (it is read that the feature's profile view

comprising the frame/boarder), identifying an inner boundary of the frame/boarder line entities (paragraph [0065], line 5-8), and temporarily deleting all graphic entities outside the inner boundary (paragraph [0041], line 16-18), (by applying the threshold, the number of detailed features to be included in the projection view is limited, as result it's deleting all the graphic entities that are outside the boundary).

Yamamoto does not explicitly mention the removing of frame/ boarder temporarily.

Agnes et al., in analogous environment, teaches a dimension generation filter and analysis where the frame/ boarder is temporarily removed by filtering the unwanted dimension from all views of drawing (column 5, line 18-21).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Agnes et al., where removing the frame/ boarder temporarily, in the system of Yamamoto in order to provide a user with the capability to better control the dimension generation process (column 1, line 49-50).

(11) Regarding claim 19:

Yamamoto discloses the removing all the subject matter as described in claim 17 above.

Yamamoto does not explicitly mention that the filter process includes temporarily removing other entities including any one or more of: dimension, machine marks, lines of prescribed type or name or color, drawing layers of prescribed name, text with prescribed color, and blocks.

Agnes et al., in analogous environment, teaches a dimension generation filter and analysis where filtering the drawing to exclude drawing data items from generation process (column 2, line 15-18), (it is read that the drawing data items includes lines of prescribed type, name, and blocks).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Agnes et al., where removing other entities, in the system of Yamamoto in order to provide a user with the capability to better control the dimension generation process (column 1, line 49-50).

(12) Regarding claim 36:

Yamamoto discloses all the subject matter as described in claim 23 above.

Yamamoto does not explicitly mention a filter process for temporarily removing extraneous material from the drawing, prior to extracting the vector properties.

Agnes et al., in analogous environment, teaches a dimension generation filter and analysis where filtering the drawing to exclude drawing data items from the generation process (column 2, line 15-18) prior to extracting the vector properties (paragraph [0050], line 3-4), (the extracting of vector properties is read as the same concept as the extracting of properties of the feature from the 2D CAD drawing, and it is obvious that the graphic entity includes a vector properties).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Agnes et al., where filtering the drawing, in the system of Yamamoto in order to provide a user with the capability to better control the dimension generation process (column 1, line 49-50).

(13) Regarding claim 37:

Yamamoto discloses all the subject matter as described in claim 36 above.

Yamamoto does not explicitly mention that the filtering of the drawing includes temporarily removing a frame/ boarder of the drawing.

Agnes et al., in analogous environment, teaches a dimension generation filter and analysis where filtering of the drawing includes temporarily removing a frame/ boarder of the drawing (column 2, line 37-40), (the removing of the frame/ boarder is read as the same concept as deleting of the drawing data).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Agnes et al., where filtering of the drawing, in the system of Yamamoto in order to provide a user with the capability to better control the dimension generation process (column 1, line 49-50).

(14) Regarding claim 38:

Yamamoto discloses the identifying of line entities, which make up the frame/boarder (paragraph [0044], line 14-17), (it is read that the feature's profile view comprising the frame/boarder), identifying an inner boundary of the frame/boarder line entities (paragraph [0065], line 5-8), and temporarily deleting all graphic entities outside the inner boundary (paragraph [0041], line 16-18), (by applying the threshold, the number of detailed features to be included in the projection view is limited, as result it's deleting all the graphic entities that are outside the boundary).

Yamamoto does not explicitly mention the removing of frame/ boarder temporarily.

Agnes et al., in analogous environment, teaches a dimension generation filter and analysis where the frame/ boarder is temporarily removed by filtering the unwanted dimension from all views of drawing (column 5, line 18-21).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Agnes et al., where removing the frame/ boarder temporarily, in the system of Yamamoto in order to provide a user with the capability to better control the dimension generation process (column 1, line 49-50).

(15) Regarding claim 39:

Yamamoto discloses the removing all the subject matter as described in claim 37 above.

Yamamoto does not explicitly mention that the filter process includes temporarily removing other entities including any one or more of: dimension, machine marks, lines of prescribed type or name or color, drawing layers of prescribed name, text with prescribed color, and blocks.

Agnes et al., in analogous environment, teaches a dimension generation filter and analysis where filtering the drawing to exclude drawing data items from generation process (column 2, line 15-18), (it is read that the drawing data items includes lines of prescribed type, name, and blocks).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Agnes et al., where removing other entities, in the system of Yamamoto in order to provide a user with the capability to better control the dimension generation process (column 1, line 49-50).

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto, Agnes et al. and Inoue et al., as applied to claim 1 above, and further in view of Tally et al. (US 6,918,092) and Naka et al. (US 5,583,975)

(1) Regarding claim 4:

Yamamoto, Agnes et al. and Inoue et al. disclose all the subject matter as described in claim 1 above.

Yamamoto, Agnes et al. and Inoue et al. do not explicitly mention the defining of a boundary enclosing an area, which includes the graphic entities in the drawing and dividing the area to define a plurality of view area, such that each view area includes one or more graphic entities, and no graphic entity is included in more that one area.

(A) Tally et al., in analogous environment, teaches a graphical list grouping widget and method of use, where defining a boundary enclosing an area, which included the graphic entities in the drawing (column 3, line 28-42).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Tally et al., where defining a boundary enclosing an area, in the system of Yamamoto in order to provide the segmenting of sets of distinct entities into groups with associated boundaries each having an associated logic (column 2, line 10-13).

(B) Naka et al., in analogous environment, teaches an image generation apparatus and method, where dividing the area to define a plurality of view area

(column 7, line 50-55), such that each view area includes one or more graphic entities, and no graphic entity is included in more that one area (it is obvious that each view area includes one or more graphic entities, and no graphic entity is included in more that one area).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Naka et al., where dividing the area to define a plurality of view area, in the system of Yamamoto in order to computing intensity across visible surfaces with a lesser computation amount and without deteriorating the image qualities (column 2, line 1-2).

12. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto, Agnes et al., Inoue et al., Tally et al., and Naka et al., as applied to claim 4 above, and further in view of Takahashi et al. (US 6,256,417).

Yamamoto, Agnes et al., Inoue et al., Tally et al., and Naka et al. disclose all the subject matter as described in claim 4 above.

Yamamoto, Agnes et al., Inoue et al., Tally et al., and Naka et al. do not explicitly mention that the boundary is a boundary rectangle, and splitting the bounding rectangle to define plurality of view rectangles.

Takahashi et al., in analogous environment, teaches an image coding method, where the boundary is a boundary rectangle (column 5, line 6), where dividing the boundary rectangle to define a plurality of view rectangles (column 4, line 66-67, and column 5, line 1-5).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Takahashi et al., where the boundary is a boundary rectangle, in the system of Yamamoto in order to effectively utilized the significant signal to improve the coding efficiency (column 2, line 57-60).

13. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto, Agnes et al. and Inoue et al., as applied to claim 7 above, and further in view of Ajima et al. (US 5,390,199).

(1) Regarding claim 8:

Yamamoto, Agnes et al. and Inoue et al. disclose all the subject matter as described in claim 7 above.

Yamamoto, Agnes et al. and Inoue et al. do not explicitly mention the setting of type code bits corresponding to the property type and setting data code bits corresponding to each item of property data.

Ajima et al., in analogous environment, teaches an advanced code error detection apparatus and system, where setting the type code bits corresponding to the property type (column 6, line 33), (the first state is read as the same concept as the type code bits) and setting data code bits corresponding to each item of property data (column 6, line 35-40).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Ajima et al., where the setting of type code bits is corresponding to the property type, in the system of Yamamoto in order to reliably

detecting a bit error in bit data of a reception code input before the establishment of synchronization regardless of the use of burst frames (column 4, line 61-65).

(2) Regarding claim 9:

Yamamoto, Agnes et al. and Inoue et al. disclose all the subject matter as described in claim 8 above.

Yamamoto, Agnes et al. and Inoue et al. do not explicitly mention the comparing of each property data item with a predetermined sub-set of data associated.

Ajima et al., in analogous environment, teaches an advanced code error detection apparatus and system, where comparing a bit data output from output terminal with the bit data output of the reception code input (column 6, line 42-45), (the comparing of a bit data output from output terminal with the bit data output of the reception code input is read as the same concept as the comparing of each property data item with a predetermined sub-set of data associated).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Ajima et al., where comparing a bit data output from output terminal with the bit data output of the reception code input, in the system of Yamamoto in order to reliably detecting a bit error in bit data of a reception code input before the establishment of synchronization regardless of the use of burst frames (column 4, line 61-65).

14. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto, Agnes et al. and Inoue et al., and Ajima et al., as applied to claim 9 above, and further in view of Bloomfield et al. (US-PGPUB 2001/0036322).

Yamamoto, Agnes et al. and Inoue et al., and Ajima et al. disclose all the subject matter as described in claim 9 above.

Yamamoto, Agnes et al. and Inoue et al., and Ajima et al. do not explicitly mention that each bit has an associated attribute.

Bloomfield et al., in analogous environment, teaches an image processing system using an array processor, where each code bit has an associate attribute (paragraph [0053], line 1-7).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Bloomfield et al., where each code bit has an associate attribute, in the system of Yamamoto because such feature has an advantage of scalability, ease of programming, deterministic high speed processing, high throughput, controllability, and extensibility (paragraph [0023], line 9-11).

15. Claims 20-26,32-35,44-46, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (US-PGPUB 2001/0043236) in view of Inoue et al. (US-PGPUB 2003/0149780).

(1) Regarding claim 20:

The recitation "a method of coding a view in a 3-dimensional CAD drawing" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Yamamoto discloses a 3-dimensional CAD system (paragraph [0012], line 4), comprising:

a) deriving a 2-dimensional view from the 3-dimensional CAD model (paragraph [0036], line 1-4), (the producing of 2-dimensional view from the 3-dimensional view is read as the same concept as the deriving of 2-dimensional view from the 3-dimensional CAD model);

b) identifying a feature of the view, where the feature comprises a graphic entity or a group of graphic entities (paragraph [0012], line 14-18, and paragraph [0058], line 12-13);

d) extracting properties of the feature from the CAD model (paragraph [0050], line 3-4), (the extracting of form of every feature is read as the same concept as the extracting of properties of the feature from the CAD model), where the properties

include vector properties associated with the graphic entity or group of graphic entities (paragraph [0045], line 11-14), (it is obvious that the graphic entity includes a vector properties);

Yamamoto does not explicitly mention the generating of code bits representative of the extracted properties, adding the code bit to a view code for the view, and storing the view code.

Inoue et al., in analogous environment, teaches a verification of image data, where generating code bits representative of the extracted properties, and adding the code bit to a view code for the view (paragraph [0111], line 2-4), (the generating of MPEG-4 bit stream is read as the same concept as the generating of code bits representative of the extracted properties, and the adding of "IPMP" stream to the stream of plurality of objects is read as the same concept as the adding of the code bit to a view code for the view), and storing the view code (paragraph [0188], line 3-7), (the storing of program code is read as the same concept as the storing of the view code).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Inoue et al., where adding the code bits, in the system of Yamamoto in order to efficiently execute verification processing (paragraph [0014], line 2-3).

(2) Regarding claim 21:

Yamamoto discloses the step b) for further groups of entities in the view (paragraph [0045], line 11-15).

Yamamoto does not explicitly mention the repeating of step e), where adding the code bits to a view code for the view.

Inoue et al., in analogous environment, teaches a verification of image data, where adding the code bit to a view code for the view (paragraph [0111], line 2-4), (the adding of "IPMP" stream to the stream of plurality of objects is read as the same concept as the adding of the code bit to a view code for the view).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Inoue et al., where adding the code bits, in the system of Yamamoto in order to efficiently execute verification processing (paragraph [0014], line 2-3).

(3) Regarding claim 22:

Yamamoto discloses all the subject matter as described in claim 20 above.

Yamamoto does not explicitly mention the storing of a plurality of codes of different views.

Inoue et al., in analogous environment, teaches a verification of image data, where storing a plurality of codes of different views (paragraph [0188], line 3-7), (the storing of program code is read as the same concept as the storing of the plurality of codes of different views).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Inoue et al., where storing a plurality of codes of different views, in the system of Yamamoto in order to efficiently execute verification processing (paragraph [0014], line 2-3).

(4) Regarding claim 23:

The recitation "a method of coding a view in a CAD drawing" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Yamamoto discloses a CAD system (paragraph [0012], line 4), comprising:

a) identifying a feature of the view, where the feature comprises a graphic entity or a group of graphic entities (paragraph [0012], line 14-18, and paragraph [0058], line 12-13);

b) extracting properties of the feature from the CAD model (paragraph [0050], line 3-4), (the extracting of form of every feature is read as the same concept as the extracting of properties of the feature from the CAD model), where the properties include vector properties associated with the graphic entity or group of graphic entities (paragraph [0045], line 11-14), (it is obvious that the graphic entity includes a vector properties);

Yamamoto does not explicitly mention the generating of code bits representative of the extracted properties, adding the code bit to a view code for the view, and storing the view code

Inoue et al., in analogous environment, teaches a verification of image data, where generating code bits representative of the extracted properties, and adding the code bit to a view code for the view (paragraph [0111], line 2-4), (the generating of MPEG-4 bit stream is read as the same concept as the generating of code bits representative of the extracted properties, and the adding of "IPMP" stream to the stream of plurality of objects is read as the same concept as the adding of the code bit to a view code for the view), and storing the view code (paragraph [0188], line 3-7), (the storing of program code is read as the same concept as the storing of the view code).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Inoue et al., where adding the code bits, in the system of Yamamoto in order to efficiently execute verification processing (paragraph [0014], line 2-3).

(5) Regarding claim 24:

Yamamoto discloses the step a) for further groups of entities in the view (paragraph [0045], line 11-15).

Yamamoto does not explicitly mention the repeating of step d), where adding the code bits to a view code for the view.

Inoue et al., in analogous environment, teaches a verification of image data, where adding the code bit to a view code for the view (paragraph [0111], line 2-4), (the adding of "IPMP" stream to the stream of plurality of objects is read as the same concept as the adding of the code bit to a view code for the view).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Inoue et al., where adding the code bits, in the system of Yamamoto in order to efficiently execute verification processing (paragraph [0014], line 2-3).

(6) Regarding claim 25:

Yamamoto further discloses that the group of graphic entities includes entities having similar properties (paragraph [0047], line 4-6), (the properties are read as the geometric features), entities of a similar type or entities (paragraph [0046], line 13-15), (the similar type or entities is read as the similar class), which form the group by virtue of their location (paragraph [0065], line 9-10).

(7) Regarding claim 26:

Yamamoto further discloses that the step of extracting the properties comprises identifying a type for each property from a predefined plurality of property types (paragraph [0042], line 5-7), each property type having associated items of property data (paragraph [0053], line 4-5), extracting the property data from the CAD drawing (paragraph [0050], line 3-4) and writing the type and associated property data items to a list (paragraph [0051], line 1-3), (the class is read as the list where the property data items is written).

(8) Regarding claim 32:

Yamamoto discloses all the subject matter as described in claim 23 above.

Yamamoto does not explicitly mention that the storing of the view code includes encrypting the view code and storing the encrypted view code.

Inoue et al., in analogous environment, teaches a verification of image data, where the storing of the view code (paragraph [0188], line 3-7), (the storing of program code is read as the same concept as the storing of the view code) includes encrypting the view code and storing the encrypted view code (paragraph [165], line 5-9), (the encrypting is read as encoding "referring to the Merriam Webster dictionary", and the transferring of the object stream to the memory is read as the same concept as the storing of the encrypted view code).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Inoue et al., where adding the code bits, in the system of Yamamoto in order to efficiently execute verification processing (paragraph [0014], line 2-3).

(9) Regarding claim 33:

Yamamoto discloses the catalogue being a portion of the database in which a sub-set of drawing is stored (paragraph [0071], line 13-16), (the catalogue is read as the local mass storage which is a portion of database).

Yamamoto does not explicitly mention the storing of the encrypted view code.

Inoue et al., in analogous environment, teaches a verification of image data, where storing the encrypted view code (paragraph [165], line 5-9), (the storing of the encrypted view code is read as the same concept as the storing of encoded programs).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Inoue et al., where adding the code bits, in the

system of Yamamoto in order to efficiently execute verification processing (paragraph [0014], line 2-3).

(10) Regarding claim 34:

Yamamoto discloses that the CAD system are encoded in a computer program and stored in a computer readable storage medium (paragraph [0071], line 3-5), (it is read that the CAD system comprises all the views).

Yamamoto does not explicitly mention the storing of encrypted view codes in the drawing.

Inoue et al., in analogous environment, teaches a verification of image data, where storing the encrypted view code (paragraph [165], line 5-9), (the storing of the encrypted view code is read as the same concept as the storing of encoded programs).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Inoue et al., where adding the code bits, in the system of Yamamoto in order to efficiently execute verification processing (paragraph [0014], line 2-3).

(11) Regarding claim 35:

Yamamoto further discloses the storing of at least one of the image file of the drawing (paragraph [0039], line 6), (the image file of the drawing is read as the image data), details of a part or component depicted by the drawing, and other information relating to the drawing (paragraph [0071], line 13-16), (it is read that the CAD system comprises the details of a part or component depicted by the drawing, and other information relating to the drawing).

(12) Regarding claim 44:

Yamamoto discloses the drawing retrieval system for a CAD system (paragraph [0011], line 2) comprising means for entering (paragraph [0051], line 6-7) and means for displaying a drawing (paragraph [0046], line 1-3), and a memory for storing data including a database of drawings (paragraph [0047], line 1-3; and paragraph [0071], line 8), the drawing retrieval system comprising:

a) means for identifying a feature of the view, where the feature comprises a graphic entity or a group of graphic entities (paragraph [0012], line 14-18, and paragraph [0058], line 12-13);

b) means for extracting properties of the feature from the CAD model (paragraph [0050], line 3-4), (the extracting of form of every feature is read as the same concept as the extracting of properties of the feature from the CAD model), where the properties include vector properties associated with the graphic entity or group of graphic entities (paragraph [0045], line 11-14), (it is obvious that the graphic entity includes a vector properties);

e) comparing means for comparing (i) a first view in a first drawing entered in the entering means with (ii) a second view in a second drawing in the database, to derive a similarity index indicative of a degree of similarity between the first view and the second view (paragraph [0045], line 4-15), (the searching of the projection view database to identify the group to which the specified graphic element belongs is read as the same concept as the comparing of first view in a first drawing entered in the entering means

with (ii) a second view in a second drawing in the database, to derive a similarity index indicative of a degree of similarity between the first view and the second view).

f) means for presenting, on the basis of the similarity index (paragraph [0044], line 3-6), (the similarity index is read as the similarity class or the appropriate calss), a list of drawings from which a user can select for retrieval from the database means for retrieving a selected drawing from the database for display on the display means (paragraph [0043], line 2-3).

Yamamoto does not explicitly mention the coding means for generating of code bits representative of the extracted properties, and adding the code bit to a view code for the view.

Inoue et al., in analogous environment, teaches a verification of image data, where generating code bits representative of the extracted properties, and adding the code bit to a view code for the view (paragraph [0111], line 2-4), (the generating of MPEG-4 bit stream is read as the same concept as the generating of code bits representative of the extracted properties, and the adding of "IPMP" stream to the stream of plurality of objects is read as the same concept as the adding of the code bit to a view code for the view), and storing the view code (paragraph [0188], line 3-7), (the storing of program code is read as the same concept as the storing of the view code).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Inoue et al., where adding the code bits, in the system of Yamamoto in order to efficiently execute verification processing (paragraph [0014], line 2-3).

(13) Regarding claim 45:

Yamamoto discloses a software carrier comprising computer readable instructions for controlling a computer to code a view in a CAD drawing (paragraph [0071], line 1-7), including instructions for:

a) identifying a feature of the view, where the feature comprises a graphic entity or a group of graphic entities (paragraph [0012], line 14-18, and paragraph [0058], line 12-13);

b) extracting properties of the feature from the CAD model (paragraph [0050], line 3-4), (the extracting of form of every feature is read as the same concept as the extracting of properties of the feature from the CAD model), where the properties include vector properties associated with the graphic entity or group of graphic entities (paragraph [0045], line 11-14), (it is obvious that the graphic entity includes a vector properties);

Yamamoto does not explicitly mention the generating of code bits representative of the extracted properties, adding the code bit to a view code for the view, and storing the view code.

Inoue et al., in analogous environment, teaches a verification of image data, where generating code bits representative of the extracted properties, and adding the code bit to a view code for the view (paragraph [0111], line 2-4), (the generating of MPEG-4 bit stream is read as the same concept as the generating of code bits representative of the extracted properties, and the adding of "IPMP" stream to the

stream of plurality of objects is read as the same concept as the adding of the code bit to a view code for the view), and storing the view code (paragraph [0188], line 3-7), (the storing of program code is read as the same concept as the storing of the view code).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Inoue et al., where adding the code bits, in the system of Yamamoto in order to efficiently execute verification processing (paragraph [0014], line 2-3).

(14) Regarding claim 46:

Yamamoto discloses a software carrier comprising computer readable instructions for controlling a computer to facilitate selection by a user of a CAD drawing for retrieval from a database of CAD drawings (paragraph [0071], line 1-7), each CAD drawing in the database comprising at least one view (paragraph [0035], line 4-12) that has been coded by:

a) identifying a feature of the view, where the feature comprises a graphic entity or a group of graphic entities (paragraph [0012], line 14-18, and paragraph [0058], line 12-13);

b) extracting properties of the feature from the CAD model (paragraph [0050], line 3-4), (the extracting of form of every feature is read as the same concept as the extracting of properties of the feature from the CAD model), where the properties include vector properties associated with the graphic entity or group of graphic entities (paragraph [0045], line 11-14), (it is obvious that the graphic entity includes a vector properties);

wherein the computer readable instructions includes instructions (paragraph [0071], line 1-7)for:

i) producing a CAD source drawing comprising a source view (paragraph [0037], line 1-6);

Yamamoto does not explicitly mention the generating of code bits representative of the extracted properties, adding the code bit to a view code for the view, and ii) coding the source view in accordance with steps a) to d) above.

Inoue et al., in analogous environment, teaches a verification of image data, where generating code bits representative of the extracted properties, and adding the code bit to a view code for the view (paragraph [0111], line 2-4), (the generating of MPEG-4 bit stream is read as the same concept as the generating of code bits representative of the extracted properties, and the adding of "IPMP" stream to the stream of plurality of objects is read as the same concept as the adding of the code bit to a view code for the view), and coding the source view in accordance with the step a) to d) (paragraph [0137], line 3-4), (the coding of the source view is read as the same concept as the coding of the streams into one stream).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Inoue et al., where adding the code bits, in the system of Yamamoto in order to efficiently execute verification processing (paragraph [0014], line 2-3).

(15) Regarding claim 49:

Yamamoto discloses a method of producing a model code directly from a 3-dimensional CAD model (paragraph [0037], line 1-2), the method comprising:

a) identifying a feature of the view, where the feature comprises a graphic entity or a group of graphic entities (paragraph [0012], line 14-18, and paragraph [0058], line 12-13);

b) extracting properties of the feature from the CAD model (paragraph [0050], line 3-4), (the extracting of form of every feature is read as the same concept as the extracting of properties of the feature from the CAD model), where the properties include vector properties associated with the graphic entity or group of graphic entities (paragraph [0045], line 11-14), (it is obvious that the graphic entity includes a vector properties);

Yamamoto does not explicitly mention the generating of code bits representative of the extracted properties, adding the code bit to a view code for the view, and storing the view code.

Inoue et al., in analogous environment, teaches a verification of image data, where generating code bits representative of the extracted properties, and adding the code bit to a view code for the view (paragraph [0111], line 2-4), (the generating of MPEG-4 bit stream is read as the same concept as the generating of code bits representative of the extracted properties, and the adding of "IPMP" stream to the stream of plurality of objects is read as the same concept as the adding of the code bit

to a view code for the view), and storing the view code (paragraph [0188], line 3-7), (the storing of program code is read as the same concept as the storing of the view code).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Inoue et al., where adding the code bits, in the system of Yamamoto in order to efficiently execute verification processing (paragraph [0014], line 2-3).

16. Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto and Inoue et al., as applied to claim 23 above, and further in view of Ajima et al. (US 5,390,199).

(1) Regarding claim 27:

Yamamoto and Inoue et al. disclose all the subject matter as described in claim 23 above.

Yamamoto and Inoue et al. do not explicitly mention the setting type code bits corresponding to the property type and setting data code bits corresponding to each item of property data.

Ajima et al., in analogous environment, teaches an advanced code error detection apparatus and system, where setting type code bits corresponding to the property type (column 6, line 33), (the first state is read as the type code bits), and setting data code bits corresponding to each item of property data (column 6, line 35-40)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Ajima et al., where setting type code bits corresponding to the property type, in the system of Yamamoto in order to reliably detect bit error in bit data including the bit data of a reception code input before the establishment of synchronization regardless of the use of burst frames (column 4, line 61-65).

(2) Regarding claim 28:

Yamamoto and Inoue et al. disclose all the subject matter as described in claim 27 above.

Yamamoto and Inoue et al. do not explicitly mention the comparing of each property data item with a predetermined sub-set of data associated.

Ajima et al. teaches an advanced code error detection apparatus and system, where comparing bit data output from output terminal with the bit data output of the reception code input (column 6, line 42-45), (the comparing of bit data output from output terminal with the bit data output of the reception code input is read as the same concept as the comparing of each property data item with a predetermined sub-set of data associated).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Ajima et al., where comparing bit data output from output terminal with the bit data output of the reception code input, in the system of Yamamoto in order to reliably detect bit error in bit data including the bit data of a

reception code input before the establishment of synchronization regardless of the use of burst frames (column 4, line 61-65).

17. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto and Inoue et al., and Ajima et al., as applied to claim 28 above, and further in view of Bloomfield et al. (US-PGPUB 2001/0036322).

Yamamoto, and Inoue et al., and Ajima et al. disclose all the subject matter as described in claim 28 above.

Yamamoto, and Inoue et al., and Ajima et al. do not explicitly mention that each bit has an associated attribute.

Bloomfield et al., in analogous environment, teaches an image processing system using an array processor, where each code bit has an associate attribute (paragraph [0053], line 1-7).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Bloomfield et al., where each code bit has an associate attribute, in the system of Yamamoto because such feature has an advantage of scalability, ease of programming, deterministic high speed processing, high throughput, controllability, and extensibility (paragraph [0023], line 9-11).

18. Claims 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (US-PGPUB 2001/0043236) in view of Inoue et al. (US-PGPUB 2003/0149780) and Ajima et al. (US 5390,199).

(1) Regarding claim 40:

Yamamoto discloses the selecting of a CAD drawing for retrieval form a database of drawing (paragraph [0039], line 9-12), comprising:

a) producing a CAD source drawing comprising a source view (paragraph [0037], line 1-6);

b) identifying a feature of the view, where the feature comprises a graphic entity or a group of graphic entities (paragraph [0012], line 14-18, and paragraph [0058], line 12-13);

c) extracting properties of the feature from the CAD model (paragraph [0050], line 3-4), (the extracting of form of every feature is read as the same concept as the extracting of properties of the feature from the CAD model), where the properties include vector properties associated with the graphic entity or group of graphic entities (paragraph [0045], line 11-14), (it is obvious that the graphic entity includes a vector properties);

g) selecting the drawing for retrieval from the database (paragraph [0043], line 2-3) on the basis of the similarity index (paragraph [0044], line 3-6), (the similarity index is read as the similar class or appropriate class).

Yamamoto does not explicitly mention the following items:

1) the comparing of the source view code with each of a plurality of stored view codes and calculating a similarity index for each stored view code of the plurality.

2) the generating of code bits representative of the extracted properties, and adding the code bit to a view code for the view

(A) Concerning item 1):

Ajima et al., in analogous environment, teaches an advanced code error detection apparatus and system, where comparing a bit data output from output terminal with the bit data output of the reception code input (column 6, line 42-45), (the comparing of a bit data output from output terminal with the bit data output of the reception code input is read as the same concept as the comparing of the source view code with the plurality of stored view codes).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Ajima et al., where comparing a bit data output from output terminal with the bit data output of the reception code input, in the system of Yamamoto in order to reliably detecting a bit error in bit data of a reception code input before the establishment of synchronization regardless of the use of burst frames (column 4, line 61-65).

(B) Concerning item 2):

Inoue et al., in analogous environment, teaches a verification of image data, where generating code bits representative of the extracted properties, and adding the code bit to a view code for the view (paragraph [0111], line 2-4), (the generating of MPEG-4 bit stream is read as the same concept as the generating of code bits representative of the extracted properties, and the adding of "IPMP" stream to the stream of plurality of objects is read as the same concept as the adding of the code bit to a view code for the view).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Inoue et al., where adding the code bits, in the system of Yamamoto in order to efficiently execute verification processing (paragraph [0014], line 2-3).

(2) Regarding claim 41:

Yamamoto further discloses, the identifying of a most similar view of the plurality of views, the most similar view having the highest similarity index, and selecting the drawing, which contains the most similar view (paragraph [0044], line 14-17), (the aligning of each feature's profile to the class in order to select the drawing as the same concept as the identifying of a most similar view of the plurality of views, the most similar view having the highest similarity index).

(3) Regarding claim 42:

Yamamoto further discloses that the selecting includes the step of displaying a list of drawing for user selection of the drawing (paragraph [0046], line 1-3), the list being ordered according to the similarity indices of views in the drawings (paragraph [0046], line 9-17).

(4) Regarding claim 43:

Yamamoto discloses the catalogue being a portion of the database in which the drawings are stored (paragraph [0071], line 13-16), (the catalogue is read as the local mass storage which is a portion of database).

Yamamoto does not explicitly mention the storing of the view codes of view contained in the drawing.

Inoue et al., in analogous environment, teaches a verification of image data, where storing the view code (paragraph [165], line 5-9), (the storing of the view code is read as the same concept as the storing of encoded programs).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Inoue et al., where adding the code bits, in the system of Yamamoto in order to efficiently execute verification processing (paragraph [0014], line 2-3).

Allowable Subject Matter

19. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not teach or suggest the assigning of data range to the vector property to achieve an even distribution of the population of vector property values in each range.

20. Claims 6,11-12, and 30-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Contact Information:

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amara Abdi whose telephone number is (571) 270-1670. The examiner can normally be reached on Monday through Friday 7:30 Am to 5:00 PM E.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wu Jingge can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Amara Abdi
11/02/2007

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